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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,010	12/10/2003	Hirohito Kondo	32739M092	6741

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EXAMINER

PHAM, HAI CHI

ART UNIT PAPER NUMBER

2861

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/731,010

Applicant(s)

KONDO ET AL.

Examiner

Hai C. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Response (2/13/06), Amendment (12/8/06).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 12-17 is/are pending in the application.
- 4a) Of the above claim(s) 12-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **FINAL REJECTION**

### ***Election/Restrictions***

1. Applicant's election of Species I corresponding to claims 1-4 in the reply filed on 02/13/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 12-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species II, there being no allowable generic or linking claim.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

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Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Ashida et al. (US. 6,897,982).

With regard to claim 1, Ashida et al. discloses an image recording apparatus comprising an LED array (LED head 100 comprising a plurality of LED array chips 102) composed of a plurality of LED elements (LEDs 102-1) whose lighting is controlled according to image data (e.g., raster data) and a driving circuit (driving circuitry 113) for driving the plurality of LED elements, and an LED array controller (LED head controller 110) for controlling driving of the LED print head, wherein the image forming apparatus further comprises a selective-information data feeder (second memory 122) for storing screen angles as information data corresponding to different sets of information on a plurality of screens as selective information inherent to the image forming apparatus (the second memory 122 stores a plurality of sets of information data such as the weighted width-ratio parameters corresponding to the plural sets of screen angles suitable for the primary colors) (col. 10, lines 31-38) (col. 12, lines 28-42) and for feeding out information data corresponding to a selected item of the selective information (col. 12, lines 47-58), and wherein the LED array controller comprises a characteristic data memory (first memory 121) for storing a plurality of sets of characteristic data each relating to one of the plurality of LED elements (the first memory 121 stores the parameters such as  $P_{correct(i)}$  characteristic to each LED element in the array so as to produce uniform LED exposure energy) (col. 6, lines 5-14),

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and a driving current correction data calculator (e.g., arithmetic unit 123, Fig. 10) for reading out the characteristic data from the characteristic data memory while receiving the information data from the selective-information data feeder in order to calculate, based on the characteristic data and the information data, driving current correction data for each of the plurality of LED elements (the arithmetic unit 123 combines the first and second plurality of parameters stored in the respective first and second memories 121 and 122 to calculate the compensation parameter values such as  $L_{correct}(i)$ , which are sent to the driving circuit 113 for driving the LED array by controlling either the driving current or the exposure time according to the compensation parameter values) (col. 4, lines 53-58) (col. 12, lines 43-65).

With regard to claim 3, Ashida et al. further teaches a drive current correction data memory (memory unit 108) for reading out and storing the drive current correction data (i.e., compensation parameters  $L_{correct}(i)$ ) (col. 7, lines 56-65) (col. 9, lines 3-9) calculated by the drive current correction data calculator (the compensation parameter values as calculated by the arithmetic unit 123 to be stored in the memory unit 108 and to be sent to the driving circuit 113 during the printing operation by the LED head controller 110) (col. 12, lines 43-65)

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashida et al. in view of Minor et al. (U.S. 4,768,046).

Ashida et al. discloses all the basic limitations of the claimed invention except for the selective information data being toner charging characteristics of the plurality of colors.

Minor et al. discloses a multi-color printer apparatus comprising an LED print head (20) having an LED array controlled according to image data and a driving circuitry (32) for driving the plurality of LED elements, a selective information data feeder for storing toner charging characteristics as information data corresponding to different sets of information on toners of the plurality of colors (e.g., changes in toner color charge-to-mass ratio), and a calculator for calculating an adjustment or correction factor for the LED elements for toner color compensation (col. 5, lines 3-53).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide input information regarding the toner charging characteristics of the plural colors to the device of Ashida et al. as taught by Minor et al. for the purpose of compensate for the changes in toner color characteristics due to the changes in the relative humidity, that can cause color imbalance in the final print as suggested by Minor et al. at col. 1, lines 38-45.

***Pertinent Prior Art***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Watanabe (U.S. 5,644,403) discloses an image forming apparatus comprising a laser driver for modulating the semiconductor laser based on the screen angle control signal and the image signal.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new grounds of rejection.

***Conclusion***

8. Applicant's amendment, which changed the scope of the base claims, necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM  
PRIMARY EXAMINER

April 25, 2006